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PUBLIC SAFETY PSWN PROGRAM WIRELESS NETWORK

Public Safety Wireless Network

Saving Lives and Property Through Improved Interoperability

August 7, 2002

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
12th St. Lobby, TW–A325
Washington, DC 20554

Re: Reply Comments to *The 4.9 GHz Band Transferred from Federal Government Use*, **Further Notice of Proposed Rule Making, WT Docket No. 00-32**

Dear Ms. Dortch:

On behalf of the Public Safety Wireless Network (PSWN) Program and pursuant to Section 1.419 of the Commission's Rules, 47 C.F.R. § 1.419 (2000), enclosed herewith for filing are an original and four (4) copies of the PSWN Program's Reply Comments in the above-referenced proceeding.

Kindly date-stamp and return the additional, marked copy of this cover letter and filing to the person delivering it.

Should you require any additional information, please contact the undersigned.

Respectfully submitted,

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Iowa Army National Guard
Chair, PSWN Executive Committee
Spectrum Working Group

Steven Proctor
Executive Director,
Utah Communications Agency Network
Executive Vice-Chair,
PSWN Executive Committee

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Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	WT Docket No. 00-32
The 4.9 GHz Band Transferred from	)	
Federal Government Use	)	
	)	

To: The Commission

REPLY COMMENTS TO THE FURTHER NOTICE OF PROPOSED RULEMAKING

Filed by: The Public Safety Wireless Network Program

Date: August 7, 2002

Before the
Federal Communications Commission
Washington, DC 20554

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To: The Commission

REPLY COMMENTS TO THE FURTHER NOTICE OF PROPOSED RULEMAKING

1. The Public Safety Wireless Network (PSWN) Program[1] Executive Committee (EC) respectfully submits these Reply Comments in response to comments submitted on the Further Notice of Proposed Rulemaking (FNPRM) by the Federal Communications Commission (Commission).[2]

I. INTRODUCTION

2. The allocation of the 50 megahertz (MHz) of spectrum in the 4.9 gigahertz (GHz) band to exclusive public safety use represented a major step in expanding the communications potential for first responders across this Nation. The new allotment helps to fulfill the critical lack of spectrum for public safety communications identified by the Public Safety Wireless Advisory

[1] The PSWN Program is a federally funded initiative operating on behalf of all local, state, federal, and tribal public safety agencies. The Department of Justice and the Department of the Treasury are jointly leading the PSWN Program's efforts to plan and foster interoperability among public safety wireless networks. The PSWN Program is a 10-year initiative that is an effort to ensure that no man, woman, or child loses his or her life because public safety officials cannot talk to one another.

Committee (PSWAC).[3] Although this 50 MHz of spectrum does not satisfy all of the predicted needs of law enforcement, fire services, and emergency medical services through the year 2010, it will support robust new technologies that can prevent the loss of life and property.

3. Broadband uses, if regulated properly, can provide public safety with new features and capabilities such as streaming video, transmission of large data files, and medical monitoring devices.[4] On a larger scale, the 4.9 GHz band can enable use of technologies such as wireless local area networks (WLAN) and ad hoc "hotspot" networks that support a suite of advanced communications from a mobile, on-scene location.[5] To guarantee that these services will be readily available to the general public, the Commission must continue its diligence in examining the input received from the commenters to find the best set of guidelines to uphold spectrum efficiency, allow quick access to the spectrum, and create effective equipment, while protecting against the transmission or reception of harmful interference.

II. DISCUSSION

A. Traditional Public Safety Agencies Need Exclusive Access to the 4.9 GHz Band

4. The PSWN Program reiterates the importance of strict adherence to the definition of public safety as established by the Balanced Budget Act of 1997 (BBA-97).[6] A few commenters noted that benefits could be obtained by allowing a broader definition of public safety such as easier interaction with traditional public safety providers[7] or broader partnerships between

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[2] Second Report & Order (R&O) and FNPRM, *In the Matter of The 4.9 GHz Band Transferred from Federal Government Use,* WT Docket No. 00-32, adopted February 14, 2002, rel. February 27, 2002.
[3] PSWAC Final Report, September 11, 1996, pp. 12–13.
[4] *See* Comments of the International Association of Fire Chiefs, Inc. and International Municipal Signal Association at p. 2.
[5] *See* Comments of Motorola, Inc. at summary.
[6] *See* BBA-97, H.R. 2015, 105th Congress, Title III, Section 337(f), p. 11 Stat. 258, enacted August 5, 1997.
[7] *See* Comments of the New York City Transit Authority (NYCT) at p. 9.

critical infrastructure entities and public safety.[8] Although the PSWN Program agrees that the interaction between first responders and these groups is important, first responders in the traditional public safety services require the entire 50 MHz of spectrum.[9] Allowing additional groups of users would only create more congestion and a greater possibility of interference. The PSWN Program endorses spectral efficiency; however, using technology such as the Enhanced Distributed Coordination Function, which permits prioritized use of a radio channel,[10] puts critical public safety communications at risk. Failure of such a system has the potential to jeopardize lives and property. Public safety users require the exclusive use of spectrum to be able to build, maintain, and operate radio systems to meet their particular needs.

5. Consequently, the PSWN Program strongly opposes permitting commercial or unlicensed services to operate on the 4.9 GHz band. Atheros Communications asserted that "[p]ublic safety entities would benefit and spectrum efficiency would be increased if the FCC would extend eligibility to use the 4.9 GHz band on a conditional basis to commercial services and unlicensed devices."[11] The PSWN Program realizes that the services proposed here would be spectrally efficient and would operate on a secondary basis in which they could be preempted without delay; however, these joint-use situations would create additional, unacceptable risks to safety-of-life communications—risks that cannot be outweighed by spectral efficiency.[12] In addition, Motorola points out that "Incidents can occur anywhere and an existing secondary user deployment at an incident scene has the potential to disrupt the intended communications of arriving public safety users."[13] As pointed out by many of the submitted comments, the risks

[8] *See* Comments of the Association of American Railroads at p. 4.
[9] PSWAC Final Report, September 11, 1996, pp. 59–61.
[10] *See* Comments of Atheros Communications, Inc. at p. 7.
[11] Id., at p. 5.
[12] *See* Comments of the Office of the Chief Technology Officer, Government of the District of Columbia at p. 4.
[13] *See* Comments of Motorola, Inc. at p. ii.

generated by allowing commercial or unlicensed services on the 4.9 GHz band far outweigh the benefits of the increased spectral efficiency.

6. The PSWN Program notes the overwhelming support shown in the submitted comments for the ability to establish formal Memoranda of Understanding (MOU) in mutual-aid situations. Historically, the public safety community has promoted the importance of interoperable communications at all levels of government, particularly in response to large-scale incidents.[14] The City of Phoenix, Arizona, remarked that, "A temporary need for interoperability and coordination of mutual operations should be agreed to per a Memorandum of Understanding specifying the terms and conditions of a sharing agreement between local and state Public Safety entities and other users, including Federal entities."[15] In particular, Federal Government use could be handled in a manner similar to that being used for 700 MHz band, as authorized by the Commissions Rules at 90.421.[16] The PSWN Program agrees with the National Public Safety Telecommunications Council (NPSTC) that MOUs created under the authority of a state or local agency's license could authorize incident-specific temporary additional use by other safety-of-life and critical infrastructure entities such as utilities, the American Red Cross, and others who require critical communications in a mutual-aid situation, as Section 2.103(b) of the Commission's Rules does for federal users in the 700 MHz band.[17]

[14] *See* e.g., Comments of NPSTC at p. 2, Comments of Motorola, Inc. at p. 8, and the Petition for Rulemaking By the Federal Law Enforcement Wireless Users Group to Promote Interoperability and Efficient Use of Allotted Spectrum for Public Safety Agencies and Other Measures to Address Communications Needs Through the Year 2010, December 7, 2001, at para. 7.
[15] *See* Comments of the City of Phoenix at p. 2.
[16] *See* Comments of the Statewide Wireless Network New York State Office for Technology at p. 6.
[17] *See* Comments of NPSTC at p. 3.

B. Public Safety Requires the Use of Fixed Operations and Airborne Communications in the 4.9 GHz Band

7. Fixed operations provide the backbone for the successful, reliable, and redundant communications that public safety agencies across the Nation require. By allowing fixed communications, the Commission permits agencies to design and implement services in the 4.9 GHz band that will be more robust because agencies can connect users to a base station through microwave links or can establish permanent hotspot WLANs where high-incident areas are known to exist. In addition, the PSWAC Final Report requested fixed operations in the 4635–4685 MHz band, for which the recently allocated 4.9 GHz band is the substitute.[18] Although there has been some opposition to fixed operations citing the lack of available spectrum,[19] the reuse capability in the 4.9 GHz band is significant due to the short-range propagation characteristics of the band that allow greater spectrum efficiency.

8. The PSWN Program advocates aeronautical mobile use of 4.9 GHz band spectrum to support video applications used by public safety personnel. Helicopters and other aircraft are invaluable in tracking and combating wildfires, weather related disasters such as tornadoes and floods, and in responding to other emergencies. By permitting aeronautical mobile use of this band, the Commission can ensure that vital and current information will reach the people that may be depending on early warnings for their safety and survival. Furthermore, ongoing operations in the air can coordinate strategy and response with personnel on the ground, and take part in critical evacuation, search and rescue, and other tasks that can benefit from having assistance and observation capabilities above the ground.

[18] PSWAC Final Report, September 11, 1996, p. 61.
[19] *See* Comments of the Association of Public-Safety Communications Officials-International, Inc. (APCO) at p. 6.

9. The PSWN Program also finds the arguments made in the Los Angeles County Sheriff's Department Petition for Reconsideration (LACSD Petition) persuasive.[20] The LACSD Petition points out that a complete ban on aeronautical mobile use of this spectrum is not narrowly tailored to meet the Commission's objective of protecting radio astronomy use of adjacent frequencies,[21] nor is it in the public interest to deny law enforcement personnel a specific tool that they have traditionally used with great success in combating crime and protecting lives and property in the past. The instances where radio astronomy operations are a factor are very limited, and geographical restrictions can be drawn to safeguard the few locations where this is a consideration. The LACSD Petition has received additional support from within the public safety community.[22] The PSWN Program realizes that interference to the existing services on the neighboring band is a serious concern; however, even opponents of aeronautical mobile use concede that they would support a plan if interference with radio astronomy applications could be prevented.[23]

C. The Channel Plan for the 4.9 GHz Band Must Be Tailored to Broadband Public Safety Operations

10. This new band of spectrum allocated for public safety communications will enable the use of new technologies that will not only protect the citizens better, but also protect the safety of first responders. To effectively implement these communications devices, an appropriate channel plan must be developed. As NPSTC commented, the Commission should "adopt a channel plan that will give users maximum flexibility in their choice of technologies."[24] The

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[20] *See* Los Angeles County Sheriff's Department Petition for Reconsideration of the Second R&O and FNPRM in WT Docket No. 00-32, May 9, 2002 (*LACSD Petition*).
[21] Petition at pp. 2–3.
[22] *See* Comments of APCO in Response to Petitions for Reconsideration and Clarification, WT Docket No. 00-32, June 28, 2002, at pp. 1–2; see also Petition for Reconsideration or Clarification of Microwave Radio Communications, WT Docket No. 00-323, May 8, 2002.
[23] *See* Comments of The National Academies of Sciences, at p. 7.
[24] *See* Comments of NPSTC at p. 5.

PSWN Program cautions that the plan must accommodate public safety communications' broadband requirements while preventing the recurrence of interference to public safety operations. As the Commission has readily acknowledged with regard to the 800 MHz public safety band, interference causes serious difficulties for law enforcement, fire service, and emergency medical personnel that can cost lives.[25]

D. The Commission Should Take Advantage of the Bodies in Place at the State and Regional Levels by Licensing Through the States and Regional Planning Committees and Also Allowing Blanket Licensing

11. The PSWN Program agrees with commenters that the most effective method to manage the new 4.9 GHz band is through state-sponsored bodies, a strategy that has been successful in administering the 700 MHz public safety band. In the case of a large-scale incident, a state is well prepared to coordinate the communications needed between responding agencies because, in most situations, the state-sponsored agency has the contacts and familiarity needed to efficiently bring together the parties at an incident scene. A Regional Planning Committee (RPC) has similar capabilities and should be employed if a state does not have an appointed body, such as a State Interoperability Executive Committee (SIEC), to lead this coordination effort. The PSWN Program agrees with APCO that "The regional planning committees should also have the procedures in place that will allow them to coordinate on short notice in the event that more than one jurisdiction responds to the same incident or emergency situation."[26] Conversely, the PSWN Program disagrees that the participation of these bodies "would implement an unnecessary layer of regulation."[27] The concerns raised by these commenters assume the assignment of frequencies to critical infrastructure industry or utilities that normally

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[25] Notice of Proposed Rulemaking, *In the Matter of Improving Public Safety Communications in the 800 MHz Band Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels,* WT Docket No. 02-55, adopted March 14, 2002, rel. March 15, 2002, at para. 16.

[26] *See* Comments of APCO at p. 12.

[27] *See* Joint Comments of Cinergy Corporation and Consumers Energy Corporation at p. 27.

do not coordinate spectrum assignments through RPCs. As implied, adding critical infrastructure to this band would create frequency coordination problems because critical infrastructure entities are not accustomed to using RPCs to help assure the appropriate frequency assignments, and RPCs are not familiar with the critical infrastructure entities' assignments, needs, or systems.

12. To strike the balance that the Commission seeks between regulatory flexibility and the prevention of interference, the Commission should permit blanket licensing of mobile radios in the 4.9 GHz band for public safety entities. The PSWN Program agrees with NPSTC, which said that this policy is appropriate where "a single license [is] issued to an eligible entity for the use of a particular bandwidth(s)[,]...interference coordination with adjacent jurisdictions[,]...as well as specific frequency allocations among agencies with overlapping jurisdictional geography...[and] would be handled within the purview of the appropriate RPC."[28] However, the PSWN Program does not support granting "Special Temporary Authority"[29] to municipalities to speed up the deployment of these technologies. Granting municipalities these responsibilities would create a potential interference situation fraught with pitfalls. The PSWN Program is not suggesting that blanket licensing would permit unlicensed equipment, but that mobiles radio units would be licensed under a single named licensee on a jurisdictional basis, as proposed in the APCO Comments.[30]

E. Open Standards and Thorough Planning Will Foster Success in the 4.9 GHz Band

13. As part of its mission statement, the PSWN Program has consistently advocated the promotion of interoperability,[31] and one of the keys to interoperability is adoption of open standards. The PSWN Program concurs with the NYCT and "urge[s] the Commission to adopt

[28] *See* Comments of NPSTC at p. 8.
[29] *See* Comments of the City of New York at p. 9.
[30] *See* Comments of APCO at pp. 10–11.
[31] *See* FN 1, *supra.*

sufficiently flexible rules pertaining to the use of the spectrum such that different governmental entities with varying needs not be artificially constrained in meeting those needs by the standards to be set forth in this proceeding."[32] The PSWN Program suggests no specific standards at this time, but counsels the Commission to be cautious in its investigation of candidate standards to ensure they will best serve the public safety community in enhancing spectrum efficiency, interference protection, technical capabilities, cost effectiveness, and interoperability.

14. In addition to open standards, other policy initiatives can both improve interoperability and increase the effectiveness of the planning efforts for this band. First, the PSWN Program encourages the Commission to pursue the possible expansion of the pre-coordination database slated to be implemented in the 700 MHz public safety band.[33] The use of the database will help coordination in the 4.9 GHz band that requires detailed planning especially considering the high reuse resulting from the poor propagation characteristics. Secondly, the Commission would be well served by a committee consisting of selected public safety experts to help shape the policy for this new band of spectrum. Commenters have suggested tasking the National Coordination Committee (NCC) to help with policy; however the PSWN Program reminds the Commission that the NCC charter expires soon and the 4.9 GHz band does not fall under the purview of the NCC.

IV. CONCLUSION

15. The PSWN Program is optimistic regarding the new opportunities for public safety communications created by the 50 MHz allocation. Through this action, the Commission has

[32] *See* Comments of NYCT at p. 10.
[33] *See* Comments of NPSTC at p. 7.

increased the capabilities and enhanced the safety of first responders across the Nation. However, without the proper regulation and planning, this crucial spectrum may not achieve its potential. The PSWN Program requests that the Commission carefully review and consider the comments submitted herein and by other parties in this proceeding. The PSWN Program welcomes the opportunity to participate on this Docket and will continue to address the issues important to public safety communications.

Respectfully submitted,

Brigadier General Paul H. Wieck II
Iowa Army National Guard
Chair, PSWN Executive Committee
Spectrum Working Group

Steven Proctor
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Certificate of Service

In the Matter of	)	
	)	WT Docket No. 00-32
The 4.9 GHz Band Transferred from	)	
Federal Government Use	)	
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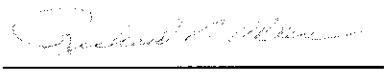
I, Richard N. Allen, Senior Associate, Booz Allen Hamilton, 8283 Greensboro Drive, McLean, Virginia, 22102–3838, hereby certify that on this date I caused to be served, by first-class mail, postage prepaid (or by hand where noted) copies of the Public Safety Wireless Network Program's Reply Comments in response to the Further Notice of Proposed Rulemaking, *The 4.9 GHz Band Transferred from Federal Government Use,* the original of which is filed herewith and upon the parties identified on the attached service list.

DATED at Fair Oaks, Virginia this 7th day of August 2002.



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